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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/709,607      | 05/18/2004  | Ping-Yang Chen       | 12590-US-PA         | 3606             |

31561 7590 05/08/2007  
JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE  
7 FLOOR-1, NO. 100  
ROOSEVELT ROAD, SECTION 2  
TAIPEI, 100  
TAIWAN

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| EXAMINER |
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WU, IVES J

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1724

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| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

05/08/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

## Office Action Summary

Application No.

10/709,607

Applicant(s)

CHEN ET AL.

Examiner

Ives Wu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

- (1). Applicants' Amendments and Remarks filed on 04/23/2007 have been received.

Claim 1 is amended. Claim 5 is cancelled.

The rejection of claim 5 in prior Office Action dated 01/19/2007 is removed accordingly.

Upon further considerations, the rejections of claims 1 and 6-11 are revised and presented together with rest of claims in the following paragraphs.

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- (2). **Claims 6-11** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6-11 depend on claim 5, which is cancelled already. Therefore, claims 6-11 are indefinite.

#### *Claim Rejections - 35 USC § 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

- (3). **Claims 1-4, 15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Drori (US004642182) in view of Strauss (US005401404A).

As to a gas inlet, a gas outlet and a hollow interior in a pipe trap body in **independent claim 1**, Drori (US004642182) discloses multiple-disc type filters in a housing shown in Figure 3A, a liquid inlet 44, a liquid outlet 46 and hollow interior between the housing 30 and filtration unit 20.

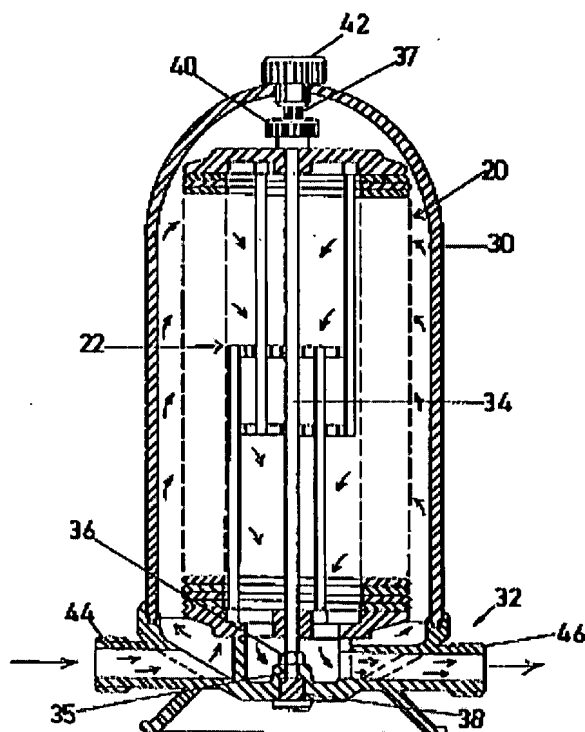


FIG 3A

As to a disc filter set up inside the pipe trap body in **independent claim 1**, Drori discloses multiple disc filter 20 in Figure 3A.

As to a pipe setup inside the pipe trap body with one end linked to the disc filter and the other end linked to the gas outlet, an area on the pipe facing the gas inlet in **independent claim 1**, Drori discloses in Figure 3A, (no number) a section facing the inlet 44 which connects to disc filtration unit 20 at one end, and its other end connects to the outlet 46.

As to the disk filter comprising a plurality of ring-shaped discs stacked up on the base with the pipe set up on top of the disc filter in **independent claim 1**, as shown in Figure 2, a stack of annular filter disk 24 is supported on the stack support 22, 1<sup>st</sup> and 2<sup>nd</sup> end elements 26 and 28 are rigidly attached to the free ends of respective rods 13 and 15 (Col. 3, line 26-31).

U.S. Patent Feb. 10, 1987 Sheet 2 of 6 4,642,182

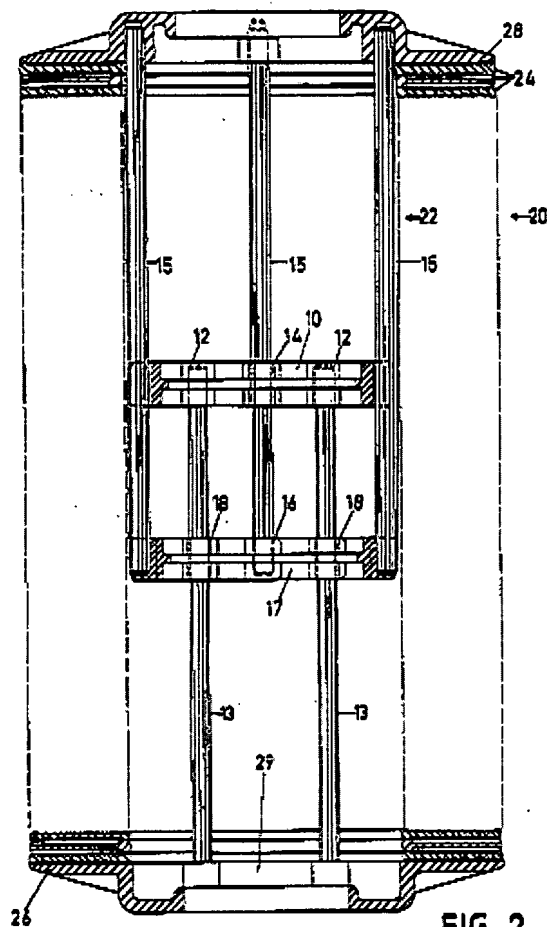
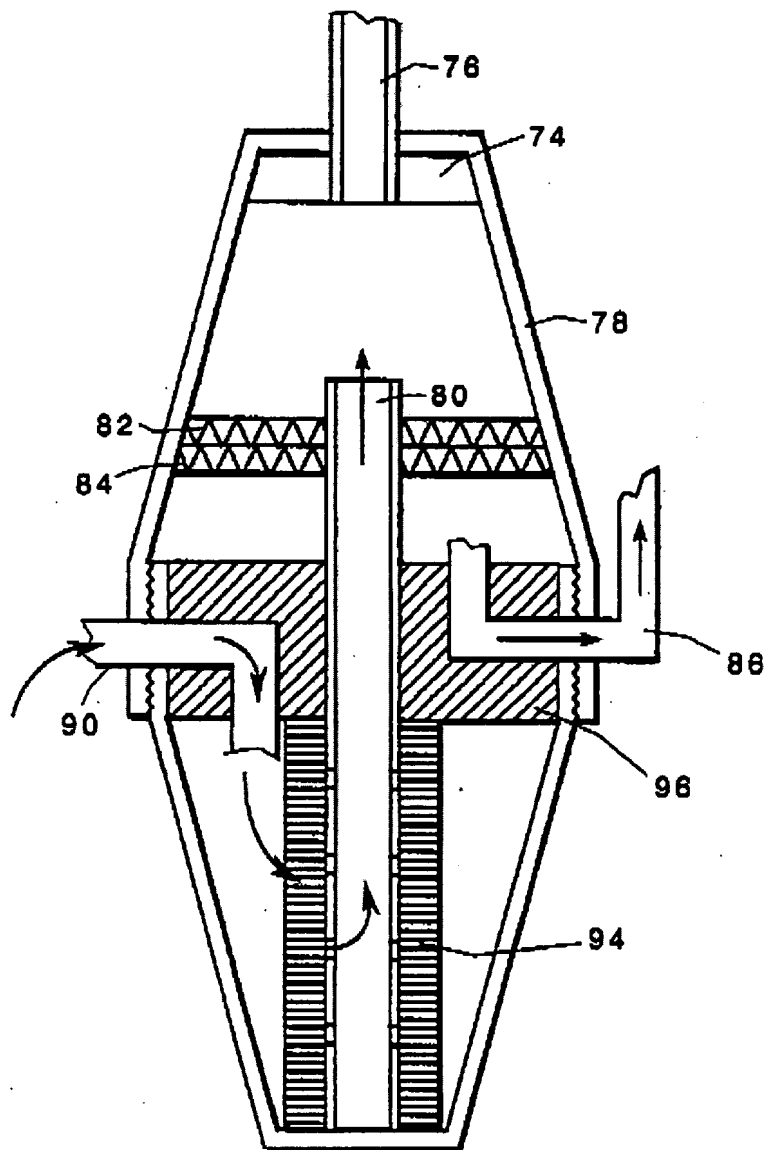


FIG 2

As to a plurality of mesh filters set up inside the pipe in **independent claim 1**, Drori does **not teach** the mesh filters set up inside the pipe.

However, Strauss (US005401404) teaches the plastic mesh separator 82 and 84 in Figure 2 in the outlet.



**Figure 2**

The advantage of adding the mesh separator in the outlet area is to assist to further remove impurity such as oil in the patentee's application.

Therefore, it would have been obvious at time of the invention was made to install further mesh filters of Strauss in the outlet of housing disclosed by Drori in order to obtain the above-mentioned advantage.

As to the gaseous exhaust entering the pipe trap from inlet, passing through the outer wall of the pipe into the disc filter interior, and traveling through the mesh filters sequentially before emerging from pipe trap via the gas outlet in **independent claim 1**, Drori discloses in the Figure 2 by arrowing the directions of the flow that includes flow entering the pipe trap, passing through outer wall of the pipe into disc filter interior, and traveling through the mesh filters sequentially before the outlet when the teaching of Strauss is combined.

As to pipe trap for filtering gaseous exhaust in **independent claim 1**, the disclosure of prior art references meets the requirements of present claim in terms of apparatus and their setup, it is reasonable to presume that the housing of Drori would be made as a pipe trap device in light of their functional similarities of each unit as well as types, connections of each unit. Although it is disclosed in prior art references for filtering liquid system, it would also be useful for the fluid such as filtering gaseous exhaust because it is intended use and not to be considered as limitation and of no significance in the claim construction.

As to limitation of **claim 2**, Drori discloses the base 32, tube body set up on the base such as filtration unit 20 and respective end members, inlet 44, outlet 46 formed on the tube body in Figure 3A.

As to limitation of **claim 3**, Drori discloses the inlet 44 on one side of the housing 30, the outlet 46 is on the other side of the housing, also on the base surface of the housing in Figure 3A. Strauss also discloses outlet 76 on the top surface of the body in Figure 2.

As to limitation of **claim 4**, Drori discloses a central securing rod 34 in Figure 3A set up in the base 32 to mount all filters including mesh separator when the teaching of Strauss is combined.

As to limitation of **claim 15**, in the absence of showing the criticality of the records, the chosen distance 3 cm between gas inlet and pipe trap body would renders prima facie obviousness within one of ordinary skills in the art at time of invention in order to provide efficient separation. *In re Woodruff* 16 USPQ2d 1934.

As to limitation of **claim 16**, although Strauss does not disclose that different mesh size for 82 and 84 and decreasing mesh size toward the outlet in Figure 2, however, it is well known in the art to arrange the decreasing mesh size filters in the direction of output to get better separation. Therefore, it would have been obvious at time of the invention to put different mesh

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size filters taught by Strauss with decreasing size toward the outlet such as the mesh size of 82 to be smaller than the mesh size of 84 in the outlet of Drori in order to obtain the above-mentioned advantage.

(4). **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Drori (US004642182) in view of Strauss (US005401404A) further in view of Uhlenbrock (US006858051B2) and Lavery et al (US003413778) for the same rationale in prior Office Action dated 01/19/2007.

(5). **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Drori (US004642182) in view of Strauss (US005401404A) further in view of Sprouse (US002929464) for the same rationale recited in prior Office Action dated 01/19/2007.

***Allowable Subject Matter***

(6). **Claims 13-14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Ives Wu

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Date: April 30, 2007

DUANE SMITH  
PRIMARY EXAMINER

*D. Smith*  
5-1-07